



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/773,990	02/06/2004	Robert K. Barr	52096	7094
7590	01/04/2006		EXAMINER	
EDWARDS & ANGELL, LLP			LEE, SIN J	
P.O. Box 55874				
Boston, MA 02205			ART UNIT	PAPER NUMBER
			1752	

DATE MAILED: 01/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/773,990	BARR ET AL.
	Examiner Sin J. Lee	Art Unit 1752

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### **Status**

1) Responsive to communication(s) filed on 06 October 2005.  
 2a) This action is **FINAL**.                            2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### **Disposition of Claims**

4) Claim(s) 1-12 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-12 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### **Application Papers**

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 06 February 2004 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### **Priority under 35 U.S.C. § 119**

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### **Attachment(s)**

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ .	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____ .

## **DETAILED ACTION**

1. In view of the amendment of October 6, 2005, previous 102(b) rejection on claims 1-6 and 8-10 over Kuchta'721 and previous 103(a) rejection on claims 7, 11 and 12 over Kuchta'721 are hereby withdrawn.
2. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

### ***Claim Rejections - 35 USC § 103***

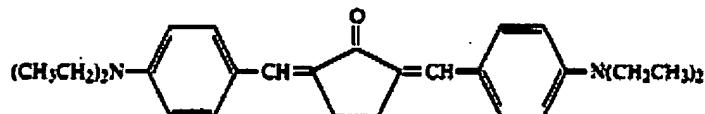
3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mooney, III et al (5,744,280) in view of Kuchta (5,112,721) (with Kneafsey et al (US 6,835,789 B1) which is being cited here to support the Examiner's assertion that Mooney's polymethylmethacrylate is a thickener).

Mooney, in his Example 2, teaches a photoimageable leuco dye/photooxidant composition containing acetone (present diluent), hexaaryliimidazole, 9,10-phenanthrenequinone (present quinone compound) and triethanolamine triacetate (present acylester of triethanolamine). Mooney also teaches (col.6, lines 10-23) that his photoinitiating system (which includes hexaaryliimidazole photoinitiator) can include sensitizers which are activated in UV, *visible* or near IR regions of the electromagnetic spectrum.

Kuchta teaches (see abstract and col.4, lines 9-68, col.3, lines 1-56, col.7, lines 53-57) an initiator system (that absorbs in the visible region), which includes a hexaaryliimidazole, a sensitizer and a co-sensitizer, which specific example is shown in col.12 and also shown below;



Kuchta also teaches (col.9, lines 48-51) the amount of the co-sensitizer to be 0.01-0.2%, *which lies within the present range* of 0.005-10wt.% of claim 6. Kuchta states (col.2, lines 4-10) that his initiator system *simultaneously enhances both photospeed and image resolution*. Based on Kuchta's teaching (especially in view of the fact that Mooney is already using hexaaryliimidazole and the fact that Mooney teaches that his

photoinitiating system can include sensitizers), it would have been obvious to one skilled in the art to use Kuchta's initiator system, which includes a hexaaryliimidazole and the co-sensitizer shown above (in the amount of 0.01-0.2%), in Mooney's Example 2 in order to enhance both photospeed and image resolution as taught by Kuchta. Therefore, Mooney in view of Kuchta would render obvious present inventions of claims 1-6 (since Kuchta teaches the present amount of the photosensitizer claimed in present claim 6, it is the Examiner's position that Mooney's composition containing Kuchta's co-sensitizer in the amount of 001-0.2% would have sufficient amount of the sensitizer to affect a color or shade change in the imaging composition upon application of energy at intensities of 5mW or less as presently recited).

Mooney also teaches (col.7, lines 34-65) the use of polystyrene (present rheology modifier according to present specification, pg.13, second full paragraph) as well as polymethylmethacrylate (present thickener as evidenced by Kneafsey et al, col.8, lines 16-17) as his polymeric binders. Therefore, Mooney in view of Kuchta would render obvious present inventions of claims 7 and 11.

Mooney teaches (col.11, lines 54-62) that an actinic radiation of ultraviolet, visible, or infrared range can be used for the exposure step. Therefore, it would have been obvious to one skilled in the art to use a visible radiation for the exposure step with a reasonable expectation of forming color images. Therefore, Mooney in view of Kuchta would render obvious present inventions of claims 8-10 and 12 (see present specification, pg.16, lines 1-5).

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sin J. Lee whose telephone number is 571-272-1333. The examiner can normally be reached on Monday-Friday from 9:00 am EST to 5:30 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly, can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*S. J. Lee*

S. Lee  
December 26, 2005

*Sin J. Lee*  
SIN LEE  
PRIMARY EXAMINER